

ELECTRO CERAMIC COMPONENTS**ABSTRACT OF THE DISCLOSURE**

An array apparatus has a micromachined SOI structure, such as a MEMS array, mounted directly on a class of insulative substrate, such as low temperature co-fired ceramic or a thermal-coefficient of expansion matched glass, in which is embedded electrostatic electrodes disposed in alignment with the individual MEMS elements, where the electrostatic electrodes are configured for substantial fanout. In a specific embodiment in order to compensate for differences in thermal-expansion characteristics between SOI and ceramic, a flexible mounting is effected by means of posts, bridges and/or mechanical elements which allow uneven expansion in x and y while maintaining z-axis stability. Methods according to the invention include fabrication steps wherein electrodes are fabricated to a post-fired ceramic substrate and coupled via traces through the ceramic substrate to driver modules.

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